FISCAL POLICY REFORM'S IMPACT ON FISCAL PERFORMANCE AND ECONOMIC DEVELOPMENT: AN ANALYSIS OF MAJOR STATES IN INDIA

Final Synopsis of Ph. D. thesis submitted to
Mangalore University for the award of the Degree

DOCTOR OF PHILOSOPHY
in
ECONOMICS

By

R.R.BIRADAR
Ph. D. Scholar
Centre for Multi-Disciplinary Development Research
Dr. B. R. Ambedkar Nagar
DHARWAD-04

RESEARCH GUIDE

Dr (Smt) Nayanatara S. Nayak
Professor
Centre for Multi-Disciplinary Development (CMDR)
DHARWAD

SUBMITTED FOR AWARD OF Ph. D. DEGREE

DEPARTMENT OF ECONOMICS
MANGALORE UNIVERSITY, MANGALORE
DECEMBER 2024

FISCAL POLICY REFORM'S IMPACT ON FISCAL PERFORMANCE AND ECONOMIC DEVELOPMENT: AN ANALYSIS OF MAJOR STATES IN INDIA

1. INTRODUCTION

Stabilization of the macroeconomic situation coupled with sustained economic growth is the key objective of fiscal and monetary policy in India. Since the macroeconomic and balance of payments crisis in 1991, a slew of reform measures have been introduced in India. One such sector is the fiscal front. There are two important tools to stabilize the macroeconomic variables, namely fiscal policy and monetary policy. Fiscal policy deals with the taxation and expenditure decisions of the government. Monetary policy deals with the supply of money and the rate of interest. In most modern economies, the government deals with fiscal policy, while the central bank is responsible for monetary policy. Fiscal policy is composed of several parts. These include tax policy, expenditure policy, investment or disinvestment strategies, and debt or surplus management.

Fiscal policy also feeds into economic trends and influences monetary policy. If the government's revenue is more than its expenditure, it has a surplus. If it is less than its expenditure, it has a deficit. To meet the deficit (excessive expenditures), it needs to borrow from domestic or foreign sources, draw upon its foreign exchange reserves, or print an equivalent amount of money. Such decisions tend to influence other economic variables such as private savings, interest rates, investment, inflation, employment, economic growth, etc. Excessive printing of money leads to inflation. If the government borrows too much from abroad it leads to a debt crisis. If it draws down on its foreign exchange reserves, a balance of payments crisis may arise. Excessive domestic borrowing by the government may lead to higher real interest rates and the domestic private sector being unable to access funds resulting in the "crowding out" of private investment. Sometimes a combination of these can occur.

It can be noted that the impact of a large deficit on long-run growth and economic well-being is negative. Therefore, there is broad agreement that it is not prudent for a government to run an unduly large deficit. However, in the case of developing countries, where the need for infrastructure and social investments may be substantial, it is sometimes argued that running surpluses at the cost of long-term growth might also not be wise (Fischer and Easterly, 1990). The biggest challenge for the government in most developing economies

like India is to meet infrastructure and social needs without deficit or accumulating debt burden.

As in the case of most developing economies, in India fiscal policy is an important development tool to ensure growth with macroeconomic stability. In doing so, the government's tax and expenditure policies have often resulted in revenue-expenditure balances and sharp increase in public debt. Rising public debt can adversely affect savings and investment through interest rates and inflation which can limit the potential macroeconomic growth process (Raju and Mukherjee, 2010). The central governments and most of the state governments in India had high deficits and public debt with unstable economic growth in the early 1990s. To tide over this problem, the Indian Parliament passed the Fiscal Responsibility and Budget Management Act (FRBMA) in 2003 and most of the state governments have started to adopt fiscal discipline laws. In view of this, it is important to examine the impact of fiscal reforms on revenue mobilisation and expenditure; methods of deficit financing, the public debt of the centre and individual state governments, and fiscal discipline of central government and major state governments.

2. FISCAL POLICY REFORMS

Since the 1990s, the Government of India started to bring major reforms which also covered reforms in taxation and expenditure policies of the government. The rationalization of direct and indirect taxes caused significant revenue losses owing to a narrow tax base and low tax buoyancy. At the same time, the government was not able to contain its expenditure. This resulted in severe fiscal imbalance (Raju and Mukherjee, 2010).

The fiscal deficit of the central government was estimated at as high as 7.8% of GDP in 1990-91. The high fiscal deficit led to the increased debt-GDP ratio from 55.22% in 1990-91 to 63.33% in 2004-05. Growing fiscal deficit tends to have an adverse impact on macroeconomic stability and sustainability if the expenditure is mainly for current consumption needs (Raju and Mukherjee, 2010).

The revenue deficit as a percentage of fiscal deficit increased from 41.6% in 1990-91 to 79.7% in 2003-04. This is not a welcome trend, because it implies that the borrowed funds of the central government were mainly used for current consumption such as payment of salaries, pensions, and subsidies, and not for capital investment that will yield future income (Rangarajan and Subbarao, 2007). Further, a growing revenue deficit also has an adverse impact on government savings and investment resulting in low economic growth. The

sustainability of Government deficits and domestic debt mainly depends upon the size and nature of resource mobilisation as well as the disposition of public expenditure.

In view of the above, the Indian Parliament passed the FRBM Act in 2003 to ensure fiscal discipline and macroeconomic stability (Box 1). The important objectives of the Act were to: maintain transparency in fiscal management systems in the country; bring inter-generational equity in debt management and; bring long-term fiscal stability to the economy. Deficits in general can be contained through different mechanisms. It can be a front-loaded method of reducing deficits through greater resource mobilization or a back-loaded method by reducing expenditure. In India, both methods were adopted with varying degrees. To increase resources, policies like disinvestment were also followed along with major reforms in tax policies. To attain fiscal sustainability, the central government and all state governments have adopted a rule-based fiscal framework through the enactment of the FRBM Act. The Act provides targets to ensure that government finances are managed to achieve equitable and stable growth. It is necessary to assess the impact of the Act on various facets of government finances in India and also in major states.

Box 1: Major Targets Set at All India Level under FRBM Act 2003

- Elimination of Revenue Deficit by March 2009
- Reduction of Fiscal Deficit to an amount equivalent to 3% of GDP by March 2008
- Reduction of Revenue Deficit by an amount equivalent to 0.5% or more of the GDP at the end of each financial year, beginning with 2004-05.
- Reduction of Fiscal Deficit by an amount equivalent to 0.3% or more of the GDP at the end of each financial year, beginning with 2004-05.

3. THEORETICAL BACKGROUND

The impact of public fiscal deficit on economic growth has been widely debated in economics and there is no consensus among the economists on this aspect. There are three lines of theoretical approaches relating to the impact of fiscal deficit on economic development, which are briefly described below.

Classical and Neo-classical Approach: Classical and neo-classical theory postulate that high fiscal deficits created through high public investment may displace private investment, or more generally expenditure. As per this approach, public investment-driven fiscal deficits "crowd out" private investment through an increase in the interest rate,

especially if government borrowing is utilized to finance revenue deficit. It may also work through movements in the price level depending on how such investment is financed and the extent of capacity utilization in the economy. Public expenditure increases aggregate consumption in the economy which reduces aggregate savings. A reduction in aggregate savings results in higher interest rates, which in turn discourages private investment and overall economic growth in a closed economy.

In an open economy, higher public investment leads to higher capital inflows and a real appreciation of the currency, which results in lower net exports and, again, a reduction in economic activity. In either case, higher public expenditure appears to result in a reduction in overall economic activity. An implicit assumption in the above approach is that the economy is already at near full capacity level.

The efficacy of fiscal expansion has been questioned given the large fiscal deficits and the accumulation of a high debt-GDP ratio (Sundararajan and Thakur, 1980; Easterly, 2004). It has been argued that, apart from the problem of crowding out private investment, public spending is less efficient than the crowded-out private investment, even if such spending is on investment. Therefore, controlling fiscal deficits spurs growth in the long run (Acharya, 2001; Rangarajan, 2009).

Keynesian Approach: John Maynard Keynes advocates that high fiscal deficits are not unusual for developing countries as governments use fiscal deficits to keep aggregate domestic demand at high levels to generate growth and employment. High fiscal deficits accelerate capital accumulation and growth (Krishnamurty, 1984; Chandrasekhar, 2000; Shetty, 2001; Chelliah and Kavita Rao, 2001; Murty and Soumya, 2007; Krishnamurty, 2012). Those supporting the Keynesian approach argue that an increase in fiscal deficit due to public sector investment, especially in infrastructure, stimulates growth in the private sector. An increase in public investment provides the private sector adequate incentives to invest on a massive scale, resulting in overall economic growth. This is generally referred to as the positive "crowding in" impact of fiscal deficit.

Neo-Recardian Approach: There is another view that differs from the Classical, Neo-classical, and Keynesian approaches which is termed as the neo-Ricardian approach. According to this approach, the impact of an increase in public investment on the economy is neutral. Rational economic agents in the economy try to adjust their expenditure as per the movements in public expenditure, and there is no effect on the economy and overall savings remain unchanged. However, the empirical support in favor of the Ricardian view seems to be weak (Ball and Mankiw, 1995; Elmendorf and Mankiw, 1998).

Fiscal imbalances have remained a cause for concern in India in recent years. Despite impressive increases in revenue productivity from direct taxes, there is a real fear that fiscal imbalances will worsen, causing interest rates to rise and crowd out private investment. A higher fiscal deficit essentially means the government must take more loans from banks, preventing the availability of loans to other borrowers and driving up interest rates at the cost of industry and individual borrowers. Besides, the excess demand created by large deficits could spill over to imports and create balance of payments problems as well.

Given the above theoretical approach, several concerns have been voiced about controlling public spending and fiscal deficit. Firstly, the government has to increase public spending to boost the economy. Secondly, the fiscal deficit has to be controlled to avoid its ill effects. The expansionary fiscal policy of the last two years cannot continue and an exit strategy will have to be put in place in the subsequent budgets to ensure fiscal sustainability and greater flexibility in monetary policy operation, enhance the productivity of public spending, and avoid pressure on interest rates (Rao, 2009; Rangarajan, 2009; Kumar, 2009). Another argument is that focusing only on budget deficits can be misleading. The problem of off-budget and contingent liabilities is also quite serious. Shifting liabilities of off-budget without reducing systemic risk does not improve matters. To achieve fiscal stability, attention needs to be given to optimal paths of public consumption, investment, taxes, and borrowings rather than only focusing on primary balances (Singh and Srinivasan, 2004).

4. REVIEW OF LITERATURE

There is a growing body of empirical literature on the issues of public expenditure, fiscal deficit, debt sustainability, and economic development. A study commissioned by the Economic Commission for Latin America and The Caribbean (1997) in the Caribbean showed that the average deficit declined by almost 2 percentage points of GDP, while total revenue narrowed by 3.5 percentage points during 1987-1989. The study revealed a deteriorating fiscal position due to unwise public spending and reduced revenue collection, which have given rise to heavy debt burdens in many economies. Specifically, since the mid to late 1990s, elevated public debt has characterized many of the economies in the region.

Dholakia *et al*. (2004) examined the debt sustainability of states with a uniform target of the debt-GSDP ratio of 35% and the ratio of debt to the state's own revenue during the period 1988-89 to 2003-04. A declining trend in the latter was interpreted as an indicator of sustainability. Based on the first indicator, it was observed that there was a debt problem of

credible magnitude only in about half of the 25 states covered in the study. However, their analysis, based on the second measure, pointed out that there could be a serious problem of intolerable debt in the long-run equilibrium in two states where the interest payments to revenue receipts ratio was above the tolerable limit of 20% (Dholakia *et al*., 2004).

A study by Sahay (2005) in the Caribbean examined the macroeconomic performance of Caribbean countries during the period 1990-1997 and 1998-2003. Sahay (2005) found that an overwhelming majority of Caribbean nations have accumulated high levels of public debt, which were fuelled by weakening fiscal balances. During 1998-2003, the fiscal account position of Caribbean countries worsened with declines being recorded in the fiscal balance of each country. Sahay (2005) noted that the average public debt to GDP ratio in the Caribbean climbed from 56% in 1997 to an excess of 90% by 2003. The public debt burden borne by these countries was due to several factors such as increased interest expenditures, deteriorating primary fiscal balances, rising current and capital expenditure of the governments, and country-specific exogenous shocks, such as the removal of preferential trade agreements and natural disasters (Sahay, 2005).

A study by Rajaraman *et al.* (2005) found a sharp rise in debt of major states (1997-2002 over 1992-97). As the interest rate on state debt exceeded the nominal growth rate of GSDP (1997-2002, it highlighted the need for fiscal correction to stabilise the debt as a percentage of GSDP. The study also identified states in need of expenditure compression and improvement in their revenue collection efforts (Rajaraman *et al.*, 2005).

A study by Branch and Adderley (2007) in the Bahamas found that there was a very significant and positive relationship between public expenditure composition and economic growth. It was found that outlays on capital good boosted growth more than spending on current consumption. The study found that an expansionary fiscal stance was likely to translate into higher import demand and a growing current account deficit (Branch and Adderley, 2007).

Nayak and Rath (2009) studied debt sustainability for the Special Category States covering the period 1991-2009. Using Domar's sustainability conditions, they found that the sustainability condition was achieved in all the states except Arunachal Pradesh. However, the solvency condition was satisfied only in the case of Assam (Nayak and Rath, 2009).

A study by Misra and Khundrakpam (2009) found that the primary revenue balance, on average, at the state level had not been adequate to meet interest payments. Using the Present Value of Budget Constraint (PVBC) approach, the liabilities of the state governments during 1991-92 to 2007-08 were found to be unsustainable (Misra and Khundrakpam, 2009).

A study by Ganguly (2009) shows that due to a slowdown in the economy, revenue accrual from taxes may come down. The study argues that battling the recession requires considerable demand injection into the economy through public investment in social services and other related sectors. Hence, the states may be required to undertake increased expenditure on essential services which will require larger resource mobilisation. He refers to the decline in both tax devolution and non-plan grants by the centre to states significantly for the year 2008-09 due to the decline in revenue resources of the central government. It was also observed that there had been an increase in the proportion of high-cost debt within the total outstanding market loans till 2007-08, which entailed a larger interest payment by the states, thereby pushing the committed expenditure of the states upward. Most of the states were expected to be under pressure to implement the recommendation of SCPC which inordinately increased their salary and pension bills (Ganguly, 2009).

A study by Dutta *et al.* (2010) on fiscal and debt sustainability of Assam, covering the period 1991-2010, pointed out that a higher proportion of revenue deficit in fiscal deficit had created the problem of fiscal instability in some years during the period of study. However, the debt-GSDP ratio declined, reflecting a positive 'Domar gap' and primary surplus enjoyed by the state in some years during the period under study.

A study by Kumar and Soumya (2010) found that India's fiscal situation improved significantly after the adoption of FRBM targets by successive governments from 2003–2004 until the global crisis hit the Indian economy in early 2008-2009. The high rate of GDP growth, which averaged 8.7% between 2003-2004 and 2008–2009, also contributed to revenue buoyancy and helped bring down both revenue and fiscal deficits.

Dasgupta *et al.* (2012) examined the debt sustainability of six of the Indian state governments during 2003-12. Of the six states, three states financed their revenue expenditure largely through tax receipts and the other three did not. The states in the first group could use their borrowings to finance capital expenditure that would add to their future productive capacity. However, there was a reduction in debt-GSDP ratios of all the states during 2003-12, reflecting their adherence to the FRBM Act.

Makin and Arora (2012) examined fiscal sustainability at the state level covering the period 1990-91 to 2009-10. They estimated the primary balances required to stabilise public debt levels and achieve targeted debt-to-GSDP ratios for the individual states. The study found that the majority of the states had stabilised public debt levels as a proportion of GSDP, reducing the risk of public debt. However, the slowdown in economic growth was expected to expose many Indian states to considerable fiscal risk. The study suggested that

states needed to focus on the primary budget balance to lower their public debt to income levels.

A study by Supriyo (2012) showed that following the crisis of 1991, the government charted out a path of economic liberalisation. Tax reforms focused on lowering rates and broadening the tax base. There were attempts to curb subsidies and disinvest the government holdings in the public sector industries. While initially the fiscal deficit and public debt were brought under control, the situation again started to deteriorate in the early 2000s. This induced the adoption of fiscal responsibility legislations at the central and state levels (Supriyo, 2012). It was stated that there were also reforms in the state-level tax system with the introduction of Value Added Tax (VAT). There were major improvements in the public finances. This probably contributed to the benign macro-fiscal environment of high growth, low deficits, and moderate inflation that prevailed around 2008. The global financial crisis brought an end to this phase as the government was forced to undertake sharp counter-cyclical measures to prop up growth in view of the global downturn. The key measures suggested by the study included excise duty cuts, fiscal support to selected export industries, and ramping up of public expenditure (Supriyo, 2012).

A study by Ertekin and Bulut (2021) in selected OECD countries showed that countries' economies have different dynamics. They found the positive effect of public expenditures on economic growth and development. The public expenditure on unproductive purposes does not increase national income. They argued that public spending that will positively affect the real economy such as education, health, social security expenditures, infrastructure, and R & D should focus on the development of human capital.

A study by Rahman, Siddique and Hossain (2023) in the SAARC countries attempted to examine whether government expenditure has an impact on economic growth and vice versa and whether a long-run equilibrium has a significant relationship between the two variables. Using the random-effects panel OLS model, the study found that government spending had a strong positive impact on GDP in SAARC countries, and a long-lasting relationship existed between government expenditure and economic growth. The unidirectional causality was found between GDP and government expenditure in the region.

A study by Buthelezi (2023) investigated the impact of long-run government expenditure and economic growth in different states in South Africa. The study using the Vector-error correction (VEC) and Markov-switching dynamic regression for the data covering from 1994 to 2021 examined the short and long-run impacts of government expenditure on economic growth of different states in South Africa. The results showed that

increased government expenditure in South Africa had not resulted in the nation's economic growth. The study concluded that fiscal authorities increase government expenditure in the short run rather than in the long run and monitored government expenditure. The study recommended that the government needs to increase the effectiveness of its public programmes and service delivery so as to reduce the wastage of the limited economic resources, and the government expenditure needs to be directed to the projects that would stimulate economic growth.

A study by Emeru (2023) in Ethiopia found that in the short-run the main determinant of economic growth was spending on agriculture, education, health, and investment. The results of cointegration analysis however indicated that the public spending on education and health were the main driving forces of long-run growth, while the total government expenditure on defense does not have a significant effect on the economy of the country both in the short-run and long-run. The government expenditure on health has a positive and significant effect on economic growth in both the short and long run and therefore, the government should increase its spending on the health sector as it contributes to an improvement in the health status of the people and enhances economic growth in the country.

A study by Kocevska (2023) in North Macedonia using the data from 1991 to 2020 examined the relationship between public education expenditure and GDP per capita in the country in the short run. The study found that in the short run, the relationship between public spending on education and GDP per capita in North Macedonia was negative and statistically significant. In the long run, the relationship was negative but statistically insignificant. These results were robust and consistent with results from earlier empirical studies. The results of the study suggested that government expenditures on education did not contribute to economic growth in North Macedonia.

Sinha (2023) in his study examined the impact of government expenditure, unemployment, inflation, and household consumption on the economic growth of India using the data during 1990-2021. The results of the study showed that increasing government expenditure had a strong positive influence on the growth of national income and consumption and a negative influence on unemployment in India. The study recommended that increasing government expenditure boosts aggregate demand which could accelerate economic growth, create employment opportunities, and enhance consumption expenditure. Against this backdrop, the following research issues have been identified for the present study.

5. ISSUES FOR RESEARCH

The foregoing review of the literature reveals that most of the studies have focused on examining the trends and patterns of public expenditure, revenue mobilisation, fiscal deficits of central government only, and their impact on private investment and economic growth without taking into account the expenditure incurred by the state governments. There are a very few studies examining the impact of the FRBM Act on the fiscal discipline of the central as well as the state governments. Several studies attempted to analyse the debt sustainability of the central government without focusing on that of the state governments. However, there are not many studies that have addressed the following research questions:

- What are the trends and patterns of public expenditure and revenue mobilisation by the General Government (centre and states) and major states after the implementation of the FRBM Act?
- What is the relationship between the public expenditure with different components (revenue and capital accounts) on economic growth during the short-run and long-run?
- Have the individual states attained the fiscal targets as envisaged under the FRBM Act of each state within the stipulated period?
- What is the impact of public expenditure (with different components) on the Net State Domestic Product (NSDP)?
- Which component of public expenditure- revenue or capital account- is more effective on economic growth?
- Has the fiscal deficit of the states adversely affected the NSDP? Or what is the relationship between the state's fiscal deficit and NSDP?
- Is there any relationship between the state's fiscal deficit and private investment?
- Has the expansionary fiscal stance (increased fiscal deficit) contributed positively to the development of infrastructure, and thereby crowding in private investment?
- Has the fiscal performance index of major states improved after the implementation of the FRBM Act?
- What are the states showing high debt sustainability and poor fiscal performance index even after the introduction of the FRBM Act?
- Is the centre and state government's debt sustainable after the introduction of the FRBM Act?

Most of the above research questions are not adequately and scientifically addressed by many studies under review. These are quite useful in preparing the central and state-level fiscal policy to ensure fiscal discipline and macroeconomic stability leading to attain the Viksit Bharat by 2047. Against this background, the present study is designed with the following objectives and hypotheses.

6. OBJECTIVES OF THE STUDY

The objectives of the study are to:

- review the fiscal reforms and the implications of the Fiscal Responsibility and Budget Management Act (FRBMA) on fiscal discipline;
- analyse the trends and patterns of public expenditure and revenue mobilisation at the all-India level (General Government), Centre, All States and by major states during the pre and post-FRBM Act, and examine the impact of public expenditure on economic growth;
- analyse the trends and patterns of different deficits (revenue, fiscal and primary deficits) at the all India level (General Government), Centre, All States and impact of fiscal deficit on private investment and consequently on GDP/NSDP at-all the India level and by major states;
- analyse the trends and patterns of public debt and its sustainability at the all-India level (General Government), Centre, All States and by major states;
- construct Fiscal Performance Index (FPI) (General Government), Centre, All States during the pre and post-FRBM Act for major states in India; and
- offer policy suggestions for better management of central and state finances and debt in the light of growing marketisation.

7. HYPOTHESES

- No difference in public expenditure exists between the pre and post-FRBM Act period.
- There is no positive impact of public expenditure on economic growth.
- No difference in public revenue mobilisation exists between the pre and post-FRBM Act period.

- There is no difference in the fiscal deficit between the pre and post-FRBM Act period.
- There is no relationship between fiscal deficit and private investment
- No difference in the Fiscal Performance Index exists between the pre and post-FRBM Act period.

8. RESEARCH METHODOLOGY AND DATABASE

The study is based on secondary data collected from the Reserve Bank of India (RBI) website, the Ministry of State Finance, the Directorate of Statistics and Economics, the Economic Survey of India, etc. The data such as GDP, NSDP, public expenditure, revenue, public debt, fiscal deficit as a percentage of GDP, methods of deficit financing, public debt, etc., were collected from the various sources of Government publications for a period of 40 years starting from 1985-56 to 2022-23 classified into the pre-and post-reform (FRBM Act 2003) period. Further, in order to examine the trends in public expenditure and revenue, deficit and public debt, an annual average of five years was estimated for every five-year gap. The years from 1985-89, 1990-94, 1995-99, and 2000-04 were categorised as pre-FRBM Act. And the years during 2005-09 were considered to be the implementation period, and from 2010-14, 2015-19 and 2020-23 as the post-FRBM Act period. To verify the changes in public expenditure, public revenue, deficit, and public debt, the years from 1985-89 to 2000-04 were categorized as the pre-FRBM Act period and from 2010-14 to 2020-23 as the post-FRBM Act period.

In order to examine the changes in public expenditure, revenue, deficit, and debt during the pre and post-FRBM Act, out of 28 states 19 temporal comparable and indicative states were chosen. Further, the states such as Bihar (BH), Uttar Pradesh (UP), Madhya Pradesh (MP), Odisha (OD) and Assam (AS) were classified as the states with low HDI, West Bengal (WB), Andhra Pradesh (AP), Rajasthan (RJ) and Gujarat (GJ) as the medium HDI states, Arunachal Pradesh (AR), Karnataka (KR), Tamil Nadu (TN), Maharashtra (MH) and Haryana (HR) as the high HDI states, and Kerala (KL), Goa (GA), Himachal Pradesh (HP), Jammu and Kashmir (JK) and Punjab (PN) as the very high HDI states. The changes in public expenditure, revenue, deficit, and public debt during the pre and post-FRBM Act are analysed by major states with different levels of HDI status (Low, Medium, High, and Very High).

The Debt Sustainability Index and Fiscal Performance Index (FPI) before and after the implementation of the FRBM Act were constructed for major states by considering several indicators. According to the Maastricht Treaty, public finances is regarded as

sustainable when the deficit-to-GDP ratio is less than 3% and the debt-to-GDP ratio is below 60%. Several approaches to measure fiscal sustainability have been advanced in the literature.

The study used descriptive statistics for analysis and interpretation of the data. Advanced econometrics tools such as ADF, PP unit root test, Correlation, Cointegration, ARDL, Error Correction model (ECM), stability and diagnostic test and Granger-Causality test were employed to test the hypotheses formulated for the study. Compound annual growth rate (CARG), ratio, average, index, etc., were also employed to analyse the data. To examine the real changes in public expenditure, revenue, deficit, and debt before and after the implementation of the FRBM Act, all the data were deflated by using the GDP deflator. E-views and STATA software are used to generate the results of regression model.

9. IMPORTANCE OF THE STUDY

Most of the state governments are not able to maintain fiscal discipline and are under the fiscal and chronic debt crisis, including the centre, and thereby it has been affecting the overall development of the state economy. Many studies have examined the impact of public expenditure on economic growth by considering only the central government, without considering the entire public expenditure (both central and state governments). The FRBM Act was implemented to ensure fiscal discipline at the centre and state levels, and macroeconomic stability. There are very few studies attempting to examine the fiscal performance at the centre and state levels before and after the implementation of the FRBM Act. The construction of a state-wise Fiscal Performance Index (FPI) is quite useful for policymakers to bring about necessary changes in the FRBM Act and budgetary provisions based on the state economic structure and status. As the study has also focused on examining which component of public expenditure (revenue or capital expenditure) has a greater impact on GDP and less fiscal deficit, it is quite useful in deciding the focus of budgetary allocation.

10. LIMITATIONS OF THE STUDY

The study is based on only secondary data collected from different sources of government publications. The data presented in different reports of the government (Ministry of Finance and RBI) are not strictly and temporally comparable. The fiscal performance of each state might not necessarily be attributed to reforms in the fiscal sector; there might be some other factors that may also have a better impact on fiscal outcomes. The years of implementing the FRBM Act by each state is not similar and hence, the comparison of fiscal outcomes across the states may suffer from consistency and quality of analysis. The impact of public expenditure on economic growth may not be necessarily by the public expenditure per

se, there may be some other factors that might have contributed to it. Major states that are better comparable in nature are considered, and hence generalization of the findings may be limited.

11. ORGANISATION OF THE THESIS

The report is organized into 8 chapters. Chapter 1 presents introduction, brief literature review, research gaps, objectives, hypotheses, research methodology, importance, and limitations of the study. The theoretical background and review of empirical studies on fiscal reforms and their impact on fiscal performance and economic development are provided in Chapter 2. An overview of fiscal reforms with special reference to the FRBM Act is presented in Chapter 3. Chapter 4 provides the trends and patterns of public expenditure at the all-India level (General Government, Centre, and All states) and by major states during the pre and post-FRBM Act and its impact on economic growth.

Chapter 5 presents the trends and patterns of revenue mobilisation at the all-India level (General Government, Centre, and All states) by major states. The trends of, revenue, fiscal and primary deficits at the all-India level (General Government, Centre and All States) and by major states during the pre and post-FRBM Act, and its impact on private investment and on economic growth are analyzed in Chapter 6. The trends and patterns of public debt by different sources, debt sustainability, and construction of Fiscal Performance Index (FPI) by major states during the pre and post-FRBM Act are examined in Chapter 7. A summary of key findings and policy suggestions is provided in the last chapter.

12. KEY FINDINGS OF THE STUDY

12.1: Reforms for Fiscal Discipline

- The borrowing levels were very high in India in the 1990s and 2000s. The economy was fairing very weak due to high fiscal deficit, high revenue deficit, and high debt-to-GDP ratio. The continuous government borrowing and the resultant debt had severely impacted the health of the Indian economy by 2003.

- Further, much of the borrowing was utilized for interest payments of previous borrowings, but not for creation of productive assets purposes. This caused an increase in the interest payments of borrowings by the government. Many economists then began to caution the government that this condition is not sustainable. They advised legal steps to prevent India from falling into a debt-trap and economic crisis.

- Then it was felt that there should be control on the government of India not to resort to a high level of borrowing to fund its expenditure. A bill to bring responsibility and discipline in matters of expenditure and debt was introduced in 2000. This bill was passed by the Indian Parliament in 2003 and came to be known as the Fiscal Responsibility and Budget Management Act.
- The Fiscal Responsibility and Budget Management Bill (FRBM Bill) was introduced in India by the then Finance Minister of India, Mr.Yashwant Sinha in December 2000. The provisions provided in the initial versions of the bill were too drastic. After many discussions, a watered-down version of the bill was passed in 2003 to become the FRBM Act. The FRBM Act Rules came into force on July 5, 2004.
- The FRBM Act fixes the target for four fiscal indicators to be projected in the medium-term fiscal policy statement which includes:1) revenue deficit as a percentage of GDP; 2) fiscal deficit as a percentage of GDP; 3) tax revenue as a percentage of GDP; and 4) total outstanding liabilities as a percentage of GDP.
- The FRBM Act targets to be achieved by 2008-09 were: 1) revenue deficit had to be completely eliminated by March 31, 2009. The minimum annual reduction target was 0.5% of GDP; 2) fiscal deficit had to be reduced to 3% of GDP by March 31, 2009. The minimum annual reduction target was 0.3% of GDP; 3) the Central Government shall not give incremental guarantees aggregating an amount exceeding 0.5% of GDP in any financial year beginning 2004-05; 4) additional liabilities (including external debt at current exchange rate) should be reduced to 9% of the GDP by 2004-05. The minimum annual reduction target in each subsequent year was to be 1% of GDP.
- The government had managed to cut the fiscal deficit to 2.7% of GDP and revenue deficit to 1.1% of GDP in 2007–08 and the targets were not met. During 2007-08 the global financial crisis forced the government to infuse resources in the economy as the fiscal stimulus package in 2008. Therefore, fiscal targets had to be postponed temporarily in view of the global crisis.
- Consequently, the FRBM Act of 2003 was amended in 2012 and 2015 resulting in relaxation of target realisation year. The revenue deficit was to be eliminated by March 31, 2015. The minimum annual reduction target was 0.5% of GDP. The fiscal deficit had to be reduced to 3% of GDP by March 31, 2015. The minimum annual reduction target was 0.3% of GDP.

- The FRBM Act of 2012 was amended in 2015 with the following target: the revenue deficit had to be eliminated by March 31, 2018. The minimum annual reduction target was 0.5% of GDP. The fiscal deficit had to be reduced to 3% of GDP by March 31, 2018. The minimum annual reduction target was 0.3% of GDP.
- Then, N.K. Singh committee was set up by the government to review the FRBM Act in 2016. The objective of the committee was to review the performance of the FRBM Act and suggest the necessary changes to the provisions of the Act. The recommendations of the committee included targeting a fiscal deficit of 3% of the GDP in years up to March 31, 2020, and subsequently cutting it to 2.8 percent in 2020-21 and 2.5 percent by 2023.
- The implementation of the FRBM Act in India marked a significant step towards enhancing fiscal discipline and transparency in public finance. The Act has established a structured approach to managing fiscal deficits and debt levels, ensuring sustainable economic growth and stability.
- The journey of fiscal reforms has been complex with varying challenges at both national and state levels, but the FRBM Act has laid a robust foundation in maintaining fiscal health and achieving long-term economic objectives.

12.2: Trends and Patterns of Public Expenditure and Impact

- The average public expenditure (real value) incurred per annum, including both the central and all state governments, has increased by more than two times from Rs.6.40 lakh crore to Rs. 13.75 lakh crore during the pre-FRBM Act as compared to three times to Rs.50.66 lakh crore during the post-FRBM Act.
- The average annual expenditure incurred by the central and all state governments was estimated to be relatively higher in respect of the revenue account as compared to that of capital account during the same period.
- It is not only higher but it has also increased rapidly after the implementation of the FRBM Act to address the socio-economic problems of global economic meltdown and the COVID-19 pandemic crisis. However, in nominal value, the figure was much higher than that of real value due to a sharp hike in inflation on account of the COVID-19 pandemic lockdown and supply-chain constraints.
- Per capita total expenditure in India increased in real value by more than one and a half times from Rs.8, 279 to Rs.13,225 during 1985-89 to 2000-04, and it increased by three

times to Rs.37, 295 during 2000-04 to 2020-23. The increase was estimated to be much faster during the post-FRBM Act than that of pre-FRBM Act.

- Per capita revenue expenditure, in nominal value, was estimated to be quite higher than that of capital expenditure, and both revenue and capital expenditure showed a persistent increase during the entire period; the increase was higher during the post-FRBM Act as against the pre-FRBM Act, mostly due to increased expenditure by the governments on account of global economic meltdown during 2007-08 and COVID-19 pandemic lockdown.
- In real values, per capita revenue and capital expenditure slowed down during the post-FRBM Act as compared to that of the pre-FRBM Act. This can be attributed to a sharp hike in inflation due to a lack of production and supply-chain constraints on account of COVID-19 pandemic nationwide lockdown.
- Similarly, while the share of revenue expenditure registered an increasing trend from 70% to 83.9% during 1985-89 to 2010-14, and thereafter it started to decline to 80.9% during 2015-19 to 2020-23. In respect of capital expenditure, the opposite trends were observed, implying that the share of capital expenditure started to rise in recent years after the outbreak of the COVID-19 pandemic.
- The total public expenditure as a percentage of GDP declined from 35% to 31.9% and started increasing to 34.4% during the same period. This implies that public expenditure started to increase along with an increase in GDP.
- While the revenue expenditure as a percentage of GDP registered increasing trends from 24.4% to 27.9% during the entire period of study, the capital expenditure as a percentage of GDP registered declining trends except during 2015-19 and 2020-23. This shows that the implementation of FRBM Act has marginally changed the composition of expenditure in favor of capital accounts in recent years.
- The compound annual growth rate of total expenditure (both centre and state) increased from 5.1% during 1985-89 to 2003-04 to 7.3% during 2004-05 to 2020-23. While the CAGR of revenue expenditure increased from 6.1% to 7.3%, the CAGR of capital expenditure increased from 1.7% to 7% during the same period. This implies that though the growth rate of capital expenditure was estimated to be quite lower, the increase was much larger as compared to that of revenue expenditure.

- The annual average expenditure of the central government alone was estimated at Rs. 3.44 lakh crore accounting for 19% of GDP during 1985-89, which increased to Rs.6.75 lakh crore during 2000-04. It rapidly increased from Rs. 8.99 lakh crore to Rs. 23.77 lakh crore during 2005-09 to 2020-23.
- The data indicate that an increase in the annual average expenditure was more during the post-FRBM Act than during the pre-FRBM Act. This clearly shows that in recent years the activities of the central government have been rapidly increasing and contributing significantly towards the development and prosperity of the country. The pattern of central government expenditure is not uniform by revenue and capital account expenditures over the years.
- The average annual expenditure incurred by the central government on revenue account was estimated at Rs.2.27 lakh crore accounting for 66% of total expenditure during 1985-89 which slowly went up to Rs. 5.53 lakh crore accounting for 82% of total expenditure during 2000-04. It further increased rapidly from Rs.7.67 lakh crore during 2005-09 to Rs.19.91 lakh crore during 2020-23.
- In the case of capital expenditure, it slowly increased from Rs.1.17 lakh crore to Rs.1.22 lakh crore, and thereafter it went up to Rs.3.86 lakh crore during the same period. This indicates that the average annual public expenditure incurred by the central government increased at much faster rate after the introduction of the FRBM Act; the increase was a little faster in respect of capital expenditure as compared to that of revenue expenditure. This implies that the central government has begun to accord relatively greater importance to the development of capital assets, thereby creating more sustained employment opportunities in the country.
- The study found that the share of revenue expenditure of the central government increased from 65.8% to 88% during 1985-89 to 2010-14 and then declined to 84% during 2020-23. In the case of capital expenditure, the opposite trend was reported implying that the central government has begun to shift its focus on capital expenditure to increase productive assets in the economy in recent years.
- As far as the total public expenditure of the central government as a percentage of GDP is concerned, it started to decline from 18.8% to 13.8% during 2015-19 and thereafter it went up to 15.8% during 2020-23, mainly due to an increase in capital expenditure and decline in GDP on account of COVID lockdown. While the revenue expenditure as a

percentage of GDP remained stagnated around 12%, the capital expenditure persistently declined from 6.44% to 1.82% and then started to increase marginally reaching 2.54% during the same period.

- The compound annual growth rate of total public expenditure incurred by the central governments was higher during the post-FRBM Act period at 6.5% than that of the pre-FRBM Act period with 4.5%. In the case of revenue expenditure, it was marginally higher at 6.3% as against 6% during the same period. In the case of capital expenditure, it significantly increased from 0.2% to 7.2% during the same period. This indicates that, though the amount is small, the capital expenditure of the central government has increased more than that of revenue expenditure.
- In the case of all states, the annul total expenditure increased from Rs.2.96 lakh crore to Rs.26.89 lakh crore during the entire period, the increase was much faster during the post-FRBM Act period. The increase in the revenue expenditure was estimated to be more than that of capital expenditure but the pace of both slowed down during 2020-23. It can be noted that the increase in the average annual expenditure and share of capital expenditure in total expenditure of all state governments was more than the central government during the post-FRBM Act period.
- While the share of revenue expenditure of all states showed increasing trends with some fluctuations, the share of capital expenditure in total expenditure showed a declining trend during the entire period of the study expect during 2020-23.
- Per capita expenditure incurred by all the state governments also increased at a rapid rate from Rs.3,830 to Rs.19,914 during the entire period; the increase was much faster during the post-RFBM Act period. Per capita revenue expenditure was estimated to be more than that of capital expenditure.
- The compound annual growth rate of the total expenditure of all the state governments was not only higher than that of the central government, it increased from 5.7% to 7.9% during the same period. This shows that the state governments have spent for various socio-economic activities more than that of the central government.
- Further, it was estimated to be higher in the case of revenue expenditure as against the capital expenditure. The capital expenditure witnessed a rapid increase from 3.5% to 7.3% as compared to the revenue expenditure which increased from 6.3% to 8% during the same period.

- The data on the regional pattern of total public expenditure of the state government indicate that per capita total expenditure was estimated to be lower in the states with lower HDI as compared to that of higher HDI states. This implies that better-off states in terms of HDI can spend more money as compared to the states with worse off. Low spending means low infrastructure, low employment, and low GDP resulting in poor educational and health outcomes, as compared to those states with higher per capita spending.
- It has been observed that most of the states have witnessed a sharp increase in per capita total public expenditure during the post-FRBM Act period as compared to that of pre-FRBM Act period. The increase was found to be higher in the states with higher HDI as compared to that of lower HDI during the post-FRBM Act period.
- Going by different accounts of expenditure, it has been observed that per capita revenue expenditure was estimated to be quite higher than that of per capita capital expenditure during both the periods. Both per capita revenue and capital expenditures have increased with varying degree across different states with different levels of HDI attainments. The states with high HDI showed more increase both in per capita revenue and capital expenditure as compared to those states with low HDI achievements; the increase was much larger in respect of revenue expenditure vis-à-vis capital expenditure.
- The share of revenue expenditure was estimated to be quite higher than that of capital expenditure in most of the states, and no significant variation was noticed by states with different levels of HDI. Most of the states witnessed a marginal decline in the share of revenue expenditure as compared to that of capital expenditure during the post-FRBM Act period.
- The decline in the share of revenue expenditure and corresponding increase in the share of capital expenditure during the pre and post-FRBM Act period took place in the states with lower HDI as compared to that of lower HDI. This implies that the states with poor achievers of HDI started to focus more on capital expenditure than on revenue expenditure. Therefore, the productive capacity of such states is expected to increase after the implementation of FRBM Act.
- The data on compound annual growth rates also indicate that most of the states have witnessed a sharp rise in compound annual growth rate of both revenue and capital expenditure. The growth of revenue expenditure witnessed a sharp decline as compared to

that of capital expenditure in most of the states especially in the case of states with low HDI attainments.

- The study found that the public expenditure as a percentage of GSDP was found to be higher for the states with high HDI attainments as compared to those with lower attainments, implying that the states placed economically in better places can spend more for socio-economic development. It has been found that the capital expenditure as percentage of GSDP showed a marginally greater increase as compared to that of revenue expenditure, especially in the case of low HDI states as compared to that of high HDI states.
- *The hypothesis that 'no difference in public expenditure exists between the pre and post-FRBM Act' is rejected. The results of independent't' show that there is a rapid increase in public expenditure after the implementation of the FRBM Act.*
- The results of OLS model show that the public expenditure does not have any significant effect. It has been found that the revenue expenditure has a negative impact on economic growth, while the capital expenditure has a positive impact on economic growth, indicating that governments started to invest more in productive activities after the introduction of the FRBM Act, thereby improving fiscal health.
- The total expenditure has a small positive impact on economic growth mostly due to various challenges such as the global economic meltdown, COVID-19 pandemic, etc. As a result, the impact of total expenditure is minimal during the post-FRBM Act period as compared to that of the pre-FRBM Act period.
- *The hypothesis that 'there is no positive impact of public expenditure on economic growth' is rejected. The results of the OLS model indicate that the public expenditure of the general government has a small positive impact on economic growth*.

12.3: Trends and Patterns of Public Revenue

- The data indicate that the average total revenue mobilised per annum increased from Rs.6.07 lakh crore during 1985-89 to Rs.51.76 lakh crore during 2020-23. The increase was much faster after the implementation of the FRBM Act, especially after the introduction of VAT in 2005 and GST in 2017.
- Although the revenue and capital receipts showed a significant increase during the post-FRBM Act period, it was estimated to be more in the case of capital receipts than that of revenue receipts mostly due to a sharp decline in tax revenue and a rise in debt-creating capital receipts.
- Per capita, total revenue mobilisation also increased by more than 5 times from Rs.7852 to Rs.37927 during the entire period of study. The increase was much faster after the implementation of the FRBM Act mostly due to the implementation of VAT in 2005 and GST in 2017.
- Similarly, per capita revenue receipt was more than that of per capita capital receipt and both of them increased rapidly. The increase in per capita revenue receipt was more than

that of capital receipt except during 2020-23 due to a sharp decline in tax revenue and a rise in debt-creating public borrowings due to the outbreak of the COVID-19 pandemic and consequent nationwide lockdown.

- As far as the share of revenue receipts is concerned, the data show that it declined from 66.3% to 61.3% during 195-89 to 2000-04 with minor variation, and thereafter it went up 73.6% during 2015-19 due to the introduction of GST in 2017 and thereafter it declined to 64.9% due to COVID-19 pandemic and nation-wise lockdown. On the other hand, the share of capital receipts witnessed an opposite direction of revenue receipts during the same period.
- In respect of the total receipts as a percentage of GDP, it has hovered around one-third of GDP during the entire period of the study. Across different accounts, the data show that the share of revenue receipts started to decline from 22% to 20.2% during 1985-89 to 2000-04 and then it began to go up to 23.7% during 2015-19 and it marginally declined to 22.5% during 2020-23 due to decline in tax revenue on account of COVID-19 pandemic and economic lockdown.
- In the case of capital receipt as a percentage of GDP, it declined with some fluctuations during the entire period except during 2020-23 in which the government had to borrow money to manage the COVID-hit economy.
- After the introduction of the FRBM Act, it has been observed that while the share of revenue receipts in total receipts and as a percentage of GDP increased, that of capital receipts declined during the pre and post-FRBM Act period. An increase in the CAGR of revenue receipts was also found to be larger than that of capital receipts during the same period.
- In the case of the central government, the average total revenue mobilisation also registered an increasing trend during the entire period both in real and nominal terms; the increase was found to be much faster after the introduction of the FRBM Act. Further, the absolute amount of capital receipt increased more than that of revenue receipt during the post-FRBM Act.
- Similarly, per capita revenue receipts of the central government persistently increased from Rs. 4,026 to Rs.17,394 during the entire period; the increase was much faster after the introduction of the FRBM Act. Though the per capita capital receipts were lower than that of revenue receipts, they increased more than that of revenue receipts during the post-FRBM Act.
- The share of revenue receipts was estimated to be higher than that of capital receipts, and the share of revenue receipts witnessed a sharp decline and a corresponding increase took place in the case of capital receipts during 2020-23 as compared to earlier periods. Similar trends were observed in respect of the revenue and capital receipts as a percentage of GDP during the same period.
- In respect of all states, the average receipts collected per annum increased from Rs.2.96 lakh crore during 1985-89 to Rs.27.97 lakh crore during 2020-23; the increase was reported to be quite faster during 2005-09 and onwards during which the VAT and GST

were introduced. The average revenue receipts collection, in real value increased more than that of per capita receipts during the entire period but the pace of increase slowed down during 2020-23 mostly due to a hike in inflation and economic crisis on account of COVID-19 pandemic.

- It has been observed that per capita receipts of the all state government increased from Rs.3826 to Rs.20,532 during the entire period of the study; the increase was faster after 2005-09 onwards. Per capita revenue receipts increased more than that of capital receipts except during 2020-23.
- The share of revenue and capital receipts by and large remained the same before and after the introduction of the FRBM Act. The total receipts as a percentage of GDP registered increasing trends during the entire period. Across different accounts, the revenue followed by capital receipts as a percentage of GDP showed increasing trends; it was a bit faster after the introduction of the FRBM Act. It may be mainly due to the implementation of VAT and GST.
- The CAGR indicates that the capital receipts of all states grew more than that of revenue receipts during the post-FRBM Act period. It can also be noted that the per capita and share of capital receipts of the central government were more than that of all states, implying that all the states have accorded more importance for raising revenue through tax and non-taxes sources as compared to that of central government.
- The data also show that the average amount of tax collection also increased rapidly after the introduction of the FRBM Act. The tax revenue of the state government was not only higher but also increased faster than that of the central government.
- Per capita tax revenue of both central and all state governments also increased quite significantly during the entire period. The increase was found to be faster in respect of tax revenue of all state governments vis-à-vis the central government.
- The share of tax revenue to total receipts of the central government started to increase more than that of all state governments after the introduction of FRBM Act, especially merging of states and central indirect taxes into GST. The tax revenue as percentage to GDP registered by and large an increasing trends especially in the case of all state governments.
- The data show that most of the states have witnessed a rapid increase in the average revenue receipts, per capita revenue receipts, share of revenue receipts and also revenue receipts as percentage to GDP during the post-FRBM Act period, implying that fiscal reforms have made a positive impact on mobilisation of tax revenue.
- The share of tax revenue, per capita tax revenue, and tax revenue as percentage to GDP also showed an increase in most of the states with varying degrees.
- *The hypothesis that 'no difference in public revenue mobilisation exists between the pre and post-FRBM Act' is rejected. The results of the independent't' test indicate that there has been a rapid increase in the public revenue mobilisation after the introduction of FRBM Act.*

- In India, the total collection of GST increased from Rs.7.41 lakh crore in 2017-18 to Rs.12.22 lakh crore in 2019-20 but it declined to Rs.11.37 lakh crore in 2020-21 due to the outbreak of COVID-19 pandemic and consequent nation-wise lockdown; and it again rapidly picked up from Rs.14.88 lakh crore in 2021-22 to Rs.20.18 lakh crore in 2023-24.
- It has been observed that the share of GST in total tax collection of both the centre and all states was estimated at 29.78% in 2017-18, which increased to as much as 54.77% in 2023-24. It is evident that GST collection has been on the faster increase in India contributing to further improvement in fiscal discipline.
- The compound annual growth rate for total GST was estimated at 15.6% cent during 2017-18 to 2023-24, which was estimated to be higher than the total tax collection (centre and all states) with 10.7%. Even it was higher than that of India's GDP (current price) with 9.37% during the same period.
- Majority of the states registered the CAGR more than 15% and surely more than the total tax collection and India's GDP Further, the CAGRs were found to relatively higher among the states with poor status in terms of HDI such as Bihar, Uttar Pradesh, Madhya Pradesh, Odisha and Assam as compared to those states with better HDI status such as Kerala, Goa, Himachal Pradesh, Jammu and Kashmir.
- The data show that the CAGR of GST was higher among the states of poor HDI status with more than 16%, while it was as low as little less than 9% among the states of better HDI status. The states with low, medium and high HDI status showed higher CAGR of GST than the total tax collection and GDP during the same period.
- The poor collection of GST among the states of higher prosperity needs to be paid more attention for policy intervention. The implementation of the FRBM Act has significantly impacted India's tax revenue collections, highlighting improved efficiency and fiscal consolidation. After the introduction of GST, the fiscal discipline has been improved both in the case of centre and all state governments.

12.4. Impact of FRBM Act on Fiscal Deficit and Private Investment

- The study found that both the central and state governments experienced an increase in their nominal and real gross fiscal deficits in the post-FRBM Act period compared to the pre-FRBM Act period. However, the central government's fiscal deficit is significantly larger than that of the states, indicating that it faces greater fiscal stress and challenges.

- Before the FRBM Act, the combined fiscal deficit of the government was 9.6% of GDP. This figure decreased to 7.8% post-FRBM Act due to various measures taken to improve fiscal health, such as the introduction of the FRBM Act and expenditure policies. However, the 2008 financial crisis and the COVID-19 pandemic posed significant challenges, and the fiscal deficit to GDP ratio remains above 3%.
- The central government has faced more fiscal strain compared to state governments. Its fiscal deficit to GDP ratio was 6.3% before the FRBM Act and decreased to only 5% after the implementation of the Act. Although the central government initially met the FRBM Act targets up to 2008, subsequent economic shocks have worsened its fiscal health.
- In contrast, state governments have performed well in maintaining fiscal discipline. The fiscal deficit to GDP ratio decreased from 3.3% to 2.8% in the post-FRBM Act period. This indicates that state governments have adhered more closely to their fiscal legislative rules (FLR) and are in a better fiscal position compared to the central government.
- *The hypothesis that 'there is no difference in the fiscal deficit between the pre and post-FRBM Act' is rejected. The results of the independent't' test show that there existed huge differences among them after the introduction of the FRBM Act.*
- Among high HDI states, like Karnataka, Tamil Nadu, Maharashtra, and Haryana have maintained a FD to GSDP ratio of less than 3% in both the pre- and post-FRBM periods. This indicates strong fiscal health, primarily due to their effective revenue collection from their own sources.
- Among Medium HDI states, only Gujarat achieved an FD-to-GSDP ratio lower than 3% in the post-FRBM Act period. In low HDI States, Madhya Pradesh, Orissa, and Assam managed to bring their FD to GSDP ratio below 3% in the post-FRBM period. These states improved their fiscal health by boosting their own revenue rather than relying on borrowings.
- Medium, High, and Very High HDI states experienced greater fiscal stress, burden, and challenges compared to Low HDI states. In the post-FRBM Act period, these states have significantly higher per capita borrowings than in the pre-FRBM Act period, reflecting their efforts to balance expenditures with revenues.
- Both central and state governments saw an increase in nominal and real revenue deficits post-FRBM Act compared to pre-FRBM Act levels. However, the central government's deficits were notably larger, highlighting greater fiscal challenges at the central level.
- Before the FRBM Act, the combined government revenue deficit stood at 4.2% of GDP. This figure decreased to 3.7% post-FRBM Act. However, subsequent challenges from the 2008 financial crisis and the COVID-19 pandemic posed significant hurdles in maintaining deficit levels as per FRBM Act guidelines.
- The central government faced more pronounced fiscal strain compared to state governments. Its revenue deficit to GDP ratio increased from 3.0% before the FRBM Act to 3.5% post-implementation. In contrast, state governments demonstrated stronger fiscal discipline. The revenue deficit to GDP ratio dropped from 1.2% to 0.2% during the post-

FRBM Act period, highlighting adherence to fiscal legislative rules (FLR) and a comparatively stronger fiscal position compared to the central government.

- In very high HDI states, Jammu & Kashmir and Goa achieved revenue surpluses, while Himachal Pradesh met the FLR target for revenue deficits, indicating improved fiscal health. Among High HDI states, Karnataka and Arunachal Pradesh had revenue surpluses, and Maharashtra met the FLR target for revenue deficits in the post-FLR period. In Medium HDI states, only Gujarat reached the FLR target post-FLR.
- All low HDI states achieved revenue surpluses in the post-FLR period, showing better fiscal management. Both the central and state governments experienced an increase in nominal and real primary deficits after the FRBM Act came into effect. However, the central government's primary deficits were significantly larger, indicating greater fiscal challenges at the central level.
- Before the FRBM Act, the combined government primary deficit was 3.8% of GDP. This figure decreased to 2.4% after the Act was implemented, due to measures like the FRBM Act and expenditure policies aimed at improving fiscal health.
- The central government faced more severe fiscal strain compared to state governments. Its primary deficit to GDP ratio decreased from 2.4% before the FRBM Act to 1.6% after the Act was implemented.
- In contrast, state governments showed stronger fiscal discipline. The primary deficit to GDP ratio dropped from 1.4% to 0.9% in the post-FRBM period, indicating adherence to fiscal legislative rules (FLR) and a comparatively stronger fiscal position than the central government.
- In very high HDI states, only Himachal Pradesh achieved a strong fiscal position with a primary deficit (PD) of 0.2% after adhering to fiscal legislative rules (FLR), showing improved fiscal management.
- High HDI states like Arunachal Pradesh and Maharashtra had the lowest primary deficits of 0.4% post-FLR period, indicating better fiscal control.
- In medium HDI states, West Bengal recorded the lowest primary deficit at 0.6% during the post-FLR period. Low HDI states, Uttar Pradesh had the lowest primary deficit value at 0.8%. Interestingly, Orissa reported a negative primary deficit post-FLR, suggesting they did not borrow for developmental activities during that period.
- Post-FRBM Act, nominal external finance increased from Rs.1,532 crore to Rs.16,241 crore, and real external finance rose to Rs.15,161 crore. However, the share of external finance in total funding decreased from 4.9% before the act to 3.5% after, with the EF/GDP ratio dropping to 0.2%.
- The nominal internal finance increased from Rs.66,489 crore to Rs.6,20,144 crore post-FRBM Act, with real internal finance reaching Rs.5,28,648 crore. The proportion of internal finance in total funding increased from 95.1% before the act to 96.5% after, though the IF/GDP ratio decreased to 4.8%.

- For the combined government, market borrowings rose from Rs. 42,629 crore to Rs. 6,89,167 crore in nominal terms, with inflation-adjusted figures increasing to Rs. 6,01,146 crore. The MB/GDP ratio increased sharply from 1.2% before the act to 5.9% post-act, driven by economic crises like the financial crisis and the COVID-19 pandemic.
- Similarly, for the central government, nominal market borrowings increased from Rs. 33,927 crore to Rs. 4,33,728 crore during the post-FRBM Act, with real market borrowings reaching Rs. 3,90,779 crore.
- The share of market borrowings in total financing of the central government increased from 40.1% before the Act to 78.0% after the implementation of the FRBM Act. Conversely, the MB/GDP ratio decreased from 2.7% to 1.1% during the same period, indicating a change in the borrowing strategy's relative impact on the economy.
- For all state governments, nominal market borrowings increased from Rs. 8,703 crore to Rs. 2,55,440 crore during the post-FRBM Act, while real market borrowings reached Rs. 2,10,367 crore.
- The proportion of market borrowings in total financing rose from 17.1% before the Act to 64.7% after, and the MB/GDP ratio increased from 0.6% to 1.8%, reflecting a heightened reliance on market borrowings by the state governments to meet financial needs.
- In very high HDI states, borrowing increased after FLR, indicating continued reliance on debt for economic activities, leading to no significant fiscal improvement. This pattern is also observed in high and medium HDI states.
- Among High HDI states, Maharashtra and Karnataka improved their fiscal positions post-FLR, while Gujarat showed better fiscal health among Medium HDI states.
- Only Odisha among low HDI states reduced its borrowing, demonstrating better fiscal management. The study found that borrowing levels generally rise with the development of states.
- The correlation results indicate a negative relationship between fiscal deficit and economic growth in India. There is a negative correlation observed between fiscal deficit and investment, suggesting probable crowding out effects in India.
- State-specific analysis reveals a positive correlation between fiscal deficit and economic growth in Madhya Pradesh, West Bengal, Andhra Pradesh, Haryana, Maharashtra, Jammu & Kashmir, Himachal Pradesh, and Kerala.
- A negative correlation exists between private investment and fiscal deficit in Madhya Pradesh, Orissa, Assam, West Bengal, Andhra Pradesh, Rajasthan, Karnataka, Tamil Nadu, Maharashtra, Punjab, Himachal Pradesh, and Kerala.
- *The hypothesis that 'there is no relationship between fiscal deficit and private investment' is rejected. The results of correlation show that an increase in the fiscal deficit resulted in a decline in private investment (crowding out effect).*
- The analysis of the fiscal deficit's impact on economic growth in India reveals distinct differences between long-run and short-run effects. It shows a positive impact on growth

(coefficient: 0.02), but this effect is not statistically significant in the long run. This finding supports the Keynesian hypothesis, which suggests that deficits can boost growth.

- Other factors such as investment and tax revenue also show non-significant impacts, with investment having a negative coefficient and tax revenue showing a positive coefficient in the long run.
- In the long run, the economic reforms of 1991 (NEP 1991) and the implementation of the FRBM Act 2003 indicate positive but statistically insignificant effects on economic growth, implying that they do not have a significant impact.
- According to short-run analysis of the central government, fiscal deficit has a significant negative effect on growth (-1.52). This suggests that an increase in the fiscal deficit reduces economic growth in the short term. This finding supports the classical economic views. Private investment (positive) and tax revenue (negative) have non-significant impacts on short-term growth.
- The impacts of the FRBM Act 2003 and the Global Financial Crisis 2009 are positive but not significant, implying that they do not have a significant impact. Error Correction term indicates that nearly 90% of the short-term disequilibrium is corrected annually.
- For state governments, the short-run analysis using a Vector Auto-Regression (VAR) model indicates that the fiscal deficit has a positive effect on economic growth, but this effect is statistically insignificant. This finding lends support to the Keynesian hypothesis.
- Investment shows a negative but non-significant impact, while tax revenue indicates a positive impact, again not statistically significant.
- The effects of the FRBM Act 2003 and the global financial crisis on state-level economic growth are also positive but not significant, suggesting that these factors do not strongly influence growth outcomes in the short term.

12.5: Public Debt and Fiscal Sustainability

- Post-FRBM Act, India observed a rising trend in both nominal and real terms of combined public debt and per capita debt. The combined public debt-to-GDP (PD/GDP) ratio increased marginally from 84.8% to 85.2%. This is above the 60% threshold, indicating a significant risk of debt trap and inefficiencies in debt management.
- For the Central Government, the public debt-to-GDP ratio decreased from 60.9% to 58.1% post-FRBM Act but remained above the 40% benchmark. This suggests the central government is under substantial debt pressure and facing challenges in managing its debt effectively.
- Post-FRBM Act, all Indian states saw a rise in both nominal and real public debt, as well as per capita debt. The states' public debt-to-GDP ratio increased from 23.9% to 27.1%, surpassing the 20% benchmark, which suggests that states are facing heightened debt burdens and challenges in managing their debt effectively.
- The rise in public debt after the FRBM Act can be attributed to global financial challenges, particularly the 2009 financial crisis and the COVID-19 pandemic.

- Post-FRBM Act, internal debt's share of total debt rose significantly to 93.6% from 80.2%, with the internal debt-to-GDP (ID/GDP) ratio increasing from 49.3% to 54.4%. Conversely, external debt's share declined to 6.4% from 19.8%, with the external debt-to-GDP (ED/GDP) ratio dropping from 11.6% to 3.7%. This shift indicates a growing reliance on internal borrowing and a reduced dependency on external debt.
- There was a significant increase in nominal and real terms of market loans and per capita market loans in the post-FRBM Act. The combined market loans-to-GDP (ML/GDP) ratio increased from 18.7% to 41.2%, highlighting a failure to balance revenue and expenditure.
- For the central government, the ML/GDP ratio increased from 15.4% to 29.9% in post-FRBM Act, indicating significant challenges in revenue-expenditure management.
- All states experienced a rise in nominal and real terms of market loans and per capita market loans post-FRBM Act. The states' ML/GDP ratio rose from 3.4% to 11.3%.
- Across all HDI categories, per capita liabilities significantly increased post-FRBM Act. Poor HDI states saw an increase from Rs. 7,357 to Rs. 11,388, while Very High HDI states experienced the highest increase from Rs. 20,301 to Rs. 46,029.
- Poor HDI states improved their fiscal management, with the total liabilities-to-GSDP ratio decreasing from 35.3% to 29.9%, indicating better management of debt.
- Medium HDI states saw their total liabilities-to-GSDP ratio rise from 30.2% to 34.8%, and High HDI states saw an increase from 20.7% to 26.3%, reflecting a growing debt burden.
- Public debt increased in Very High HDI states post-FRBM Act, with Jammu & Kashmir (47.3%) and Himachal Pradesh (43.1%) recording the highest debt levels.
- High HDI states also observed increasing debt levels post-FRBM Act, with Arunachal Pradesh (45.3%) and Haryana (24.1%) experiencing the highest debt ratios.
- In Medium HDI states, public debt ratios increased post-FRBM Act, with West Bengal (41.8%) and Andhra Pradesh (38.7%) recording the highest debt levels.
- Among Low HDI states, some states like Bihar (37.1%), Orissa (25.6%), and Assam (22.1%) improved their debt ratios post-FRBM Act, while others like Uttar Pradesh (37.0%) and Madhya Pradesh (27.8%) saw an increase in debt levels.
- In the post-FRBM Act period, Karnataka is the only state to achieve a debt level below 20%.
- The Combined Government Deficit Index increased from 0.087 to 0.115 during the post-FRBM Act, indicating a better fiscal health. The Central Government’s deficit index rose from 0.100 to 0.111, while all states’ deficit index increased from 0.081 to 0.120, indicating improvement in fiscal discipline.
- Combined Government Revenue Efficiency Index improved from 0.069 to 0.082 post-FRBM Act, showing enhanced revenue generation effectiveness. The Central

Government's index increased from 0.081 to 0.087, and all states' index rose significantly from 0.042 to 0.086, indicating better revenue management.

- Combined Government Expenditure Quality Index declined from 0.107 to 0.047 post-FRBM Act, suggesting reduced effectiveness in expenditure allocation. The Central Government's index decreased from 0.097 to 0.047, whereas all states' index fell from 0.063 to 0.087, indicating a deterioration in levels of expenditure efficiency.
- Combined Government Debt Index increased from 0.068 to 0.084 during the post-FRBM Act, showing better debt management. The Central Government's debt index decreased from 0.082 to 0.054, while all states' index decreased from 0.092 to 0.081, indicating failure in better debt management.
- Combined Government Debt Sustainability Index improved from 0.119 to 0.128 during the post-FRBM Act, indicating better sustainability of debt levels. The Central Government's index increased from 0.118 to 0.125, whereas all states' index increased from 0.135 to 0.120, showing improvements in managing debt sustainability.
- Combined Government Composite Fiscal Performance Index decreased from 0.081 to 0.072 during the post-FRBM Act, indicating a slight decline in overall fiscal performance. The Central Government's index decreased from 0.082 to 0.073, while all states' index increased from 0.080 to 0.070, reflecting that the central government has greater fiscal stress as compared to the state governments.
- *The hypothesis that ' no difference in Fiscal Performance Index exists between the pre and post-FRBM Act' is rejected as the Fiscal Performance Index has improved for all the states after the implementation of the FRBM Act.*

13. POLICY SUGGESTIONS

Based on the above key findings of the study, the following policy prescriptions are offered to ensure better management of central and state finances and fiscal discipline:

- To create more capital assets, and thereby generate more employment and income-earning avenues, capital expenditure should be enhanced at a much higher rate than that of revenue expenditure (positive effects of public expenditure).
- The states that borrow more money from the capital market and spend for unproductive purposes such as freebies, more than the targeted limit of 20% should be sanctioned with lower grants or devolution of resources.
- The states with lower HDI should accord a greater priority for capital expenditure to enhance the productive capacity on par with high HDI states.
- As per capita capital expenditure was estimated to be quite lower in the states of low HDI such as Bihar, Uttar Pradesh, Madhya Pradesh, Odisha, and Assam, and medium HDI states like West Bengal, Andhra Pradesh, Rajasthan and Gujarat as compared to high and very high HDI states, it should be increased at much faster rate than ever before so that productive assets can be produced and employment and income earning avenues can be increased.

- The revenue receipts of both central and all state governments are declining and capital receipts are increasing in recent years, leading to increase in the fiscal deficit and liabilities which will have adverse impact on the economy. Hence, the revenue receipts of central and state governments should be increased and the revenue deficit should be eliminated.
- The debt creating capital receipts can be borrowed but it should effectively be utilized for productive purpose to generate employment and income earning avenues.
- The direct tax, which is regressive, should be increased so that revenue deficit and inequality can be reduced.
- In order to raise the tax revenue and reduce the revenue deficit, the indirect tax can be increased for those items that are detrimental to public health and for the items of rich people.
- The states with lower HDI should be allowed to borrow more capitals from the market and invest in more productive activities and the states with high HDI should be encouraged to generate more non-tax revenue by providing adequate and qualitative basic amenities to the public.
- Encourage both central and state governments to diversify their revenue sources to reduce dependency on borrowings. This can include enhancing tax collection efficiency, broadening the tax base, and exploring non-tax revenue avenues.
- Provide technical and financial support to low and medium-HDI states to improve their revenue generation capabilities, ensuring more balanced fiscal health across regions.
- Encourage the sharing of best practices in fiscal management among states, particularly from those with better fiscal health, to help lagging regions improve their fiscal performance.
- Ensure strict adherence to the FRBM Act targets by implementing robust monitoring and compliance mechanisms for both central and state governments. Regular audits and transparent reporting can help maintain fiscal discipline.
- Periodically review and update the FRBM Act to address emerging fiscal challenges and incorporate lessons learned from economic shocks like the 2008 financial crisis and the COVID-19 pandemic.
- Given the higher fiscal stress observed in high and very high HDI states, adopt specific policies to address their unique fiscal challenges. This can include targeted fiscal relief measures and support for infrastructure projects that enhance revenue potential.
- Implement incentive structures that reward states for maintaining fiscal discipline and achieving FRBM Act targets, potentially through performance-linked grants or additional central support.
- Increase internal finance by improving tax collection mechanisms, broadening the tax base, and minimizing tax evasion. Policies such as GST optimization and direct tax reforms can enhance revenue generation.
- As the collection of GST is quite less among poor HDI states, effective measures should be designed and implemented to ensure better mobilisation and compliance with GST.

- Review and rationalize public expenditure to ensure that funds are directed towards high-impact areas. Implement performance-based budgeting to link financial allocations with outcomes.
- Implement a comprehensive debt management strategy that includes clear frameworks for borrowing limits, debt servicing plans, and risk mitigation measures. Ensure transparency in the use of borrowed funds to enhance public trust and investor confidence.
- Review the FRBM Act targets periodically to align them with current economic realities. Introduce flexibility in fiscal rules to accommodate economic shocks, ensuring a balance between fiscal discipline and economic growth.
- Provide incentives for states that demonstrate fiscal responsibility and adhere to FRBM guidelines. These incentives could include increased central grants or access to lower-cost borrowing.
- Offer targeted fiscal support and capacity-building programs for low HDI states to improve their revenue generation and reduce reliance on market borrowings.
- Closely monitor borrowing practices in high and very high HDI states to ensure that increased borrowing does not lead to unsustainable debt levels. Encourage these states to implement fiscal reforms that balance growth with debt sustainability.
- Enhance fiscal coordination between the central and state governments by holding regular dialogues and joint fiscal planning sessions. This approach will help harmonize borrowing strategies and facilitate the sharing of best practices.
- Central and state governments should aim to balance their fiscal deficit levels with growth objectives.
- Address the negative correlation between fiscal deficit and investment by implementing policies that mitigate crowding out effects.
- Encourage private investment through tax incentives, streamlined regulatory processes, and public-private partnerships (PPPs) to complement government borrowing.
- High-growth states with positive fiscal deficit-growth correlations could focus on maintaining sustainable deficit levels that support growth, while states with negative correlations should prioritize fiscal discipline and investment-friendly policies.
- Focus on enhancing revenue efficiency through reforms in tax administration, broadening tax bases, and reducing tax evasion. This will help in increasing government revenues without exacerbating the debt burden.
- Strengthen expenditure management by prioritizing spending on productive sectors, reducing wasteful expenditures, and enhancing efficiency in public sector operations.
- Enhance the implementation and monitoring of the FRBM Act to ensure adherence to debt-to-GDP ratio targets at both central and state levels. This includes periodic reviews and adjustments to fiscal policies to mitigate the risk of entering a debt trap.
- Implement measures to improve the quality and efficiency of public expenditure, ensuring that spending is directed towards productive investments rather than recurrent expenses.
- Encourage states, especially those with higher debt ratios, to adopt stringent fiscal discipline measures tailored to their economic conditions. This could involve

capacity-building initiatives and peer-learning platforms to share best practices in fiscal management.

- Enhance transparency in public debt management by regularly publishing comprehensive debt reports and ensuring accountability in borrowing decisions. This will build trust among stakeholders and investors while providing a clear picture of the country's fiscal health.

The study concludes that the FRBM Act has made a significant impact on changes in the pattern of public expenditure in favour of capital expenditure, increase in revenue receipts, especially indirect tax revenue, reduced revenue, and fiscal and primary deficits. However, the targets of deficits have not yet been fulfilled by the centre and many states due to economic challenges on account of the global economic meltdown, the COVID-19 pandemic, and natural calamities resulting from climate change. Further, the Act has also improved the fiscal performance or discipline of both central and state governments. If the above said policy prescriptions are considered, the fiscal health and discipline of the central and state governments will further be enhanced, and macroeconomic stability will be maintained. A vision of "Viksit Bharat", the developed economy, will be attained by 2047 at the 100 years celebration of India's Independence.

14. FURTHER AREAS OF RESEARCH

The followings are the important areas of research in the domain of fiscal management and discipline which can be considered for preparation of a holistic policy package for administratively effective, socially acceptable and economically efficient management of public funds of the governments at different levels.

- Impact of public expenditure on social sectors such as education, health, skills and training and creating of infrastructure and productive assets contributing to sustained increased in income, based on both secondary and primary data.
- Examine the impact of development/capital expenditure on the own source revenue generation of state and local governments.
- Utilisation of funds provided through the Finance Commission's Recommendation by the respective state governments and their impact on reduction of regional disparity and horizontal inequality.
- Impact of GST on the micro, small and medium enterprises in terms of production of goods and services and their turn over and exports.
- Impact of both direct and indirect taxes levied by the centre and state governments on the distribution f income and wealth after introduction of FRBM Act or GST in India.

BIBLIOGRAPHY

Acharya, S. (2001): *India's Macroeconomic Management in the Nineties*, New Delhi: ICRIER.

Ball, L. and N. Mankiw (1995): "Relative-Price Changes as Aggregate Supply Shocks", *Quarterly Journal of Economics* 110(1): 161–193.

Branch, Sharon G. and Shaniska Adderley (2007): *Fiscal Discipline in the Achievement of Fiscal and Debt Sustainability and Growth in the Bahamas*, Research Department, Central Bank of the Bahamas.

Chandrasekhar, C. (2000): "Economic Reform and the Budget", *Economic and Political Weekly*, 35(14): 1140–1142.

Chelliah, R. and R. Kavita Rao (2001): *Rational Way of Increasing Tax Revenues in India. Presented at the conference India: Fiscal Policies to Accelerate Economic Growth* held in New Delhi. May .(Extract reproduced in Financial Express dated 11 June 2001.)

Dasgupta, R., V. Iyer, A. Paul, A. Doshi (2012): "Debt Sustainability Analysis-A Sub-National Context", *Qris Analytics Research*, July

Dholakia, Ravindra H., T.T. Ram Mohan, and N. Karan (2004): *Fiscal Sustainability of Debt of States*, Report submitted to Twelfth Finance Commission, New Delhi, Indian Institute of Management, Ahmedabad, May.

Dutta, Parag and Mrinal Kanti Dutta (2010): *Fiscal and Debt Sustainability in a Federal Structure: The Case of Assam in Eastern India*, paper presented at the 15th Annual Conference of the International Network for Economic Research (INFER), Dec 2-3.

Easterly, W. (2004): *The Widening Gyre: The Dynamics of Rising Public Debt and Falling Growth*, NIPFP-IMF Conference Paper, (January). New Delhi.

Elmendorf, D. and N. Mankiw (1998): *Government Debt*, NBER Working Paper No. W6470, New York: The National Bureau of Economic Research. Massachusetts Avenue, Cambridge.

Emran, M. S. and Farazi. S. (2009): "Lazy Banks? Government Borrowing and Private Credit in Developing Countries", *Institute for International Economic Policy*, Working Paper, 9.

Fischer, S. & Easterly, W. (1990): "The Economics of the Government Budget Constraint", *The World Bank Research Observer*. 5(2):127-142.

Fischer, S., & William, Easterly. (1990): "The economics of the government budget constraint", *The World Bank Research Observer*, 5(2): 127-42.

Fouzdar, Akanksha Singh. (2022): *Dynamics of India's Fiscal Deficit: An Analytical Study of Issues and Management.* Dept. Of Applied Business Economics, Faculty of Commerce Dayalbagh Educational Institute (Deemed University), Dayalbagh, Agra.

Ganguly, Kaushik (2009): "Issues in State Finances", *Economic and Political Weekly*, Vol XLIV No 30.

Gbosi, Augustus N. (2002): *Financial Sector instability and Challenges to Nigeria's Monetary Authorities*, African Heritage Publications.

Govinda Rao, M. (2009): Warns of High Fiscal Deficit. *The Financial Express*. DATE PUBLISHED8th July, 2009. http://www.financialexpress.com/news/govinda-rao-warns-of-high-fiscal-deficit/486309/ (accessed on 10 December 2009).

Ianchovichina, E, L. Liu and M. Nagarajan (2006): "Subnational Fiscal Sustainability Analysis - What Can We Learn from Tamil Nadu?", *Policy Research Working Paper* 3947, The World Bank, June.

Kaur, Gurleen., & Ahmed, Neetu. (2013): "Nexus between Fiscal Deficit and Economic Growth in India - An Empirical Investigation", *Abhigyan*. 31(1):13-22.

Keynes, John M. (1936): *The General Theory of Employment, Interest and Money*, London and New York: Macmillan.

Krishnamurty, K. (1984): Inflation and Growth: A Model for India. *Indian Economic Review* XIX(1), Jan-June; reprinted in *Macroeconometric Modeling of the Indian Economy*, edited by K.Krishnamurty and V.Pandit. Hindustan Publishing Co.

Kumar, R. (2009): Global Financial and Economic Crisis: Impact on India and Policy Response in *Global Financial Crisis: Impact on India's Poor Some Initial Perspectives*. India: UNDP.

Kumar, Rajiv and Alamuru Soumya (2010): *Fiscal Policy Issues for India after the Global Financial Crisis (2008–2010),* ADBI Working Paper Series, No. 249, Asian Development Bank Institute, September 2010.

Makin, Anthony J. and Rashmi Arora (2012): "Fiscal Sustainability in India at State Level, *Public Finance and Management*, Vol. 12, No. 4, October

Ministry of Finance and Budget Division. (2024): *Statements of Fiscal Policy as required under the Fiscal Responsibility and Budget Management Act,* 2003. https://www.indiabudget.gov.in/doc/frbm1.pdf

Misra, B. M. and Khundrakpam, J. K (2009): *Fiscal Consolidation by Central and State Governments: The Medium Term Outlook*, RBI Staff Studies, May 30

Mordi, N. O. (2006): "Challenges of Exchange Rate Volatility in Economic Management in Nigeria, In the Dynamics of Exchange Rate in Nigeria", *CBN Bulletin*.30 (3):17-25.

Murty, K.N. and A. Soumya (2007): "Effects of Public Investment on Growth and Poverty". *Economic and Political Weekly* XLII(1): 47–59.

Nayak, S K. and Rath, S. S. (2009): *A Study on Debt Problem of the Special Category States*, Study Conducted for the 13th Finance Commission, Government of India, Rajiv Gandhi University Itanagar Arunachal Pradesh, accessed from http://fincomindia.nic.in/writereaddata%5Chtml_en_files%5Coldcommission_html/fincom13/discussion/report19.pdf\

Nelson, M A and R D Singh (1994): The Deficit – Growth Connection: Some Recent Evidence from Developing Countries, *Economic Development and Cultural Change*, 43 (1):167-91.

Okelo Simeo Odhiambo, Momanyi G., Othuon Lucas and Fredrick O. Aila. (2013): "The Relationship between Fiscal Deficits and Economic Growth in Kenya: An Empirical Investigation", *Greener Journal of Social Sciences*. 3 (6):306-323.

Pasha, H. A. & Ghaus, A. (1996): *Sustainability of Public Debt in Pakistan*, Social Policy and Development Centre.

Pattnaik R. K., S. Raj Deepa & Chander Jai (1990): *Empirical Fiscal Research in India: A Survey*. https://www.rbi.org.in/scripts/bs_viewcontent.aspx?Id=1990

Premchand, A. (1966): *Control of Public Expenditure in India: A Historical and Analytical Account of the Administrative, Audit and Parliamentary Processes*, Allied Publishers.

Pujari, D. and Biradar, R.R. (2022): Impact of FRBM Act on Public Debt and Fiscal Balance in India: Emerging Evidence, *Economic Affairs*, 67(01): 127-132.

Rajaraman, I., S. Bhide and R.K. Pattnaik (2005): "A Study of Debt Sustainability at State Level in India", *Reserve Bank of India*, August

Raju, Sunitha and Jaydeep Mukherjee (2010): *Fiscal Deficit, Crowding Out and the Sustainability of Economic Growth: The Case of the Indian Economy*, IFRI Centre for Asian Studies, Asie Version 31 (website:ifri.org).

Ramu, M. R. Anantha and Gayithri, K. (2016): Relationship between fiscal deficit composition and economic growth in India: A time series econometric analysis, *Working Papers 367*, Institute for Social and Economic Change, Bangalore.

Rangarajan, C. (2009): "Rates May Harden by Fiscal End", *Business Standard*. 12 July. http://www.business-standard.com/india/news/rates-may-harden-by-fiscal-end-rangarajan/370457/ (accessed on 15 December 2009).

Rangarajan, C. and D. Subbarao (2007): "The Importance of Being Earnest about Fiscal Responsibility", *Economic Developments in India,* Monthly Update, 22.

Sahay, R. (2005): Stabilization Debt and Fiscal Policy in the Caribbean, *Working Paper/05/26*, Washington D.C. International Monetary Fund, Western Hemisphere Department.

Shetty, S. (2001): "Reviving the Economy: Some Explorations", *Economic and Political Weekly,* 36 (30): 2824–2830.

Singh N. and T. N. Srinivasan (2004): *Fiscal Policy in India: Lessons and Priorities*, presented at the NIPFP-IMF conference on Fiscal Policy in India, New Delhi, 16–17 January 2004.

Sundararajan, V., and S. Thakur (1980): "Public Investment, Crowding-Out and Growth: A Dynamic Model Applied to India and Korea", *International Monetary Fund Staff Papers* 27 (December 1980), Washington, DC: IMF: 814–855.

Supriyo De (2012): *Fiscal Policy in India: Trends and Trajectory*, Ministry of Finance, Government of India, January, 2012.

Tullius, C. M. (2007): *Assessment Framework of National Government Budget*, 2008 Budget Briefer. http://www.congress.gov.ph/download/cpbd/2007/02_Framework_DR_M.pdf

Research Guide Ph D. Scholar

(Dr. (Smt) Nayanatara S Nayak) (R. R . Biradar)